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Update of Vaginal Delivery after Cesarean Section

Essay

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Abstract

Vaginal delivery after cesarean section is the best method to decrease the rising rates of cesarean section. There must be proper selection of patients undergoing trial of labour. The obstetrician in charge should follow strictly the guidelines for management of a trial to avoid complications. If there are no facilities for a trial, the obstetrician should terminate the pregnancy by cesarean.

Keywords:

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Elective repeat CS

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List of Abbreviations

- ACOG: American College of Obstetricians and Gynecologists
- CDR: Cesarean Delivery Rate
- CP: Cerebral Palsy
- CPD: Cephalopelvic Disproportion
- C S: Cesarean Section
- CTG: Cardiotocography
- DIC: Disseminated Intravascular Coagulation
- DVT: Deep Vein Thrombosis
- ECV: External Cephalic Version
- HIE: Hypoxic Ischemic Encephalopathy
- LUS: Lower Uterine Segment
- MFMU: Maternal Fetal Medicine Units Network
- NICU : Neonatal intensive-care unit
- PG: Prostaglandin
- RDS: Respiratory Distress Syndrome
- TOL: Trial Of Labor
- UA: Umbilical Artery
- US: Ultra Sound
- USA: United State of American
- VBAC: Vaginal Birth After Cesarean

Introduction

There has been an increase in cesarean section rate which is not uniform but associated "with wide variations between and within countries. **(Sachs et al, 1999)**

The rise in the incidence of Cesarean section over the last thirty years is due to several factors. In particular, increasing maternal age and situations potentially requiring Cesarean section are more frequently encountered than before (prematurity, medically assisted procreation, antenatal diagnosis, previous Cesarean section, etc.). Medico legal pressure is also increasing, and the precautionary principle is leading more and more physicians to propose Cesarean section rather than trial of labor. However, although the risks of this form of delivery have decreased, they are still higher than those of vaginal delivery, especially in an emergency setting. **(Blanc et al, 2006)**

The famous statement "Once cesarean always cesarean" made by Dr. Edwin Cragin in a presentation in 1916 to Eastern Medical Society of New York City was dominating nearly 70 years back to the era when most cesarean sections involved classic uterine incision and when antibiotics and transfusions were unknown. **(Miller et al, 1994)**

For many years the scared uterus was believed to contraindicate labor out of fear of uterine rupture. **(Cunningham et al, (a) 2005)**

Due to changes in the type of uterine incision, being mostly low segment transverse, combined with advances in technology which allows continuous and accurate monitoring of the mother and fetes, the former statement is replaced by once cesarean section always controversy and the attempt at vaginal delivery should be made unless there is other

indications for abdominal delivery. **(Flamm and Geiger, 1997)**

For women who have a caesarean section in their preceding pregnancy, two care policies for birth are considered standard: planned vaginal birth and planned elective repeat caesarean. Currently available information about the benefits and harms of both forms of care are derived from retrospective and prospective cohort studies. There have been no randomized trials, and recognizing the deficiencies in the literature, there have been calls for methodologically rigorous studies to assess maternal and infant health outcomes associated with both care policies. **(Dodd et al, 2007)**

Aim of the Work

The aim of this study is to review, summarize the available literature and examine trends on vaginal birth following cesarean deliveries. We also aim to determine the maternal and perinatal outcomes at term in women with one previous cesarean delivery.

Cesarean Section

Historical Review

Cesarean section (CS) or cesarean birth is defined as an operative procedure to deliver the fetus through an incision in the abdominal and uterine walls. Although cesarean section is probably one of the oldest operations in the history of medicine, its origins are rather obscure.

Three principal explanations have been suggested. According to legend, Julius Caesar was born in this manner with the result that the procedure became known as the cesarean operation. Several circumstances weaken this explanation. However the mother of Julius Caesar lived for many years after his birth in 100 BC. And as late as the 17th century, the operation was almost invariably fatal. Second, the operation whether performed on the living or dead is not mentioned by any medical writer before the middle ages (**Fig. 1**). (**Cunningham et al (a), 2005**)



Figure 1: One of the earliest printed illustrations of cesarean section purportedly the birth of Julius Caesar. Alive infant being surgically removed from a dead woman. From Suetonius' Lives of the Twelve Caesars, 1506 woodcut. (**Quoted from the National library of Medicine. Cesarean Section a brief History. On line.**)

It has been widely believed that the name of the operation is derived from a Roman law created by Numa Pompilius 8th century BC. He ordered that the procedure is to be performed upon women dying in the last few months of pregnancy in the hope of saving the child. This explanation then holds that this *lex regia*, as it was called at first, became the *lex Caesarea* under the emperors, and the operation itself became known as cesarean operation. **(Cunningham et al (a), 2005)**

It is claimed that the first caesarean section of modern times is attributed to a Swiss man, Jacob Nufer, who in 1500 gained permission from the authorities to operate on his wife after she had been in labor for several days. She subsequently had five successful vaginal deliveries, leading some to doubt the authenticity of the story. After Nufer, the first caesarean sections with survival of the mother were performed in Ireland by Mary Donally in 1738; in England by Dr James Barlow in 1793; and in America by Dr John Richmond in 1827. The “first” in the British Empire outside the British Isles was performed in South Africa before 1821 by James Miranda Barry, though in fact caesarean sections had been performed in Africa by indigenous healers for many years **(Fig. 2)**. **(Drife, 2002)**



Figure 2: Successful Cesarean section performed by indigenous healers in Kahura, Uganda.

As observed by R. W. Felkin in 1879. **(Quoted from the National Library of Medicine. Cesarean Section a brief History On line.)**